IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A package for providing high density storage, comprising:

a hard disk carrier housing for use in a hard disk array enclosure and for holding multiple hard disk storage devices proximate to one another ~~and aligned in a row~~; and

~~an~~ a hard disk carrier access device, ~~coupled to~~ disposed within the hard disk carrier housing, for structuring access to physical addresses of the multiple hard disk storage devices within the hard disk carrier housing and providing access to each of the multiple hard disk storage devices over one connection.

2. (Currently Amended) The package of claim 1, wherein the hard disk carrier access device further comprises an address aggregator for aggregating the physical addresses of the hard disk storage devices within the hard disk carrier housing into logical addresses and making the logical addresses of the hard disk storage devices within the hard disk carrier housing available over one connection.

3. (Currently Amended) The package of claim 2, wherein the address aggregator is configured to present the hard disk storage devices as a single storage device.

4. (Currently Amended) The package of claim 2, wherein the address aggregator is configured to allowing each of the hard disk storage devices to be addressed individually using logical addresses.

5. (Currently Amended) The package of claim 1, wherein the hard disk carrier housing is configured to be conformal to multiple hard disk storage devices to minimize the amount of space used.

6. (Currently Amended) The package of claim 1, wherein the hard disk carrier housing is configured to provide an air channel for dissipating heat from multiple hard disk storage devices.

7. (Currently Amended) The package of claim 1, wherein the hard disk carrier access device is configured to enable partial population of the hard disk carrier housing with hard disk storage devices so that hard disk storage devices are capable of functioning when the hard disk carrier housing is not fully populated.

8. (Currently Amended) The package of claim 1, wherein the hard disk carrier housing further comprises fault indicators for allowing notification of an inoperable hard disk storage device within the hard disk carrier housing.

9. (Original) The package of claim 8, wherein the fault indicators are battery-powered.

10. (Currently Amended) The package of claim 1, wherein the hard disk carrier housing further comprises internal connectors for connecting internal devices.

11. (Original) The package of claim 10, wherein the internal connectors are configured for at least one type of technology selected from the group comprising: serial advanced technology attachment (SATA), serial attached SCSI (SAS), or Fibre Channel.

12. (Currently Amended) The package of claim 1, wherein the hard disk carrier access device provides failure mode data for problem diagnosis.

13. (Currently Amended) The package of claim 1, wherein the hard disk carrier housing further comprises a cooling device.

14. (Currently Amended) The package of claim 1, wherein the hard disk carrier housing further comprises a spring-loaded bracket for holding each hard disk storage device in place.

15. (Currently Amended) The package of claim 1, wherein the hard disk carrier housing is configured for holding hard disk storage devices in an end-to-end alignment.

16. (Currently Amended) The package of claim 1, wherein the hard disk carrier housing is configured for holding hard disk storage devices in a side-by-side alignment.

17. (Currently Amended) The package of claim 1, wherein the hard disk access device further comprises a controller for virtualizing the logical addresses of the hard disks storage devices within the hard disk carrier housing as at least one aggregate volume to provide a layer of abstraction to the hard disk storage devices within the hard disk carrier housing.

18. (Currently Amended) A package for aggregating electronic devices comprising:

means for use in a hard disk array enclosure and for holding multiple hard disk storage devices proximate to one another ~~and aligned in a row~~; and

means, coupled to the means for holding, for structuring access to physical addresses of the multiple hard disk storage devices within the means for holding and providing access to each of the multiple hard disk storage devices over one connection.

19. (Currently Amended) The package of claim 18, wherein the means for structuring further comprises means for virtualizing the logical addresses of hard disk storage devices within the means for holding as at least one aggregate volume to provide a layer of abstraction to the hard disk storage devices within the means for holding.

20. (Currently Amended) The package of claim 18, wherein the means for structuring further comprises means for aggregating the physical addresses of the hard disk storage devices within the means for holding into logical addresses and making the logical addresses available over one connection.

21. (Currently Amended) A ~~An~~ hard disk carrier housing access device, comprising:

memory for storing data therein, and

a processor, coupled to the memory, the processing being configured for structuring access to physical addresses of ~~the~~ multiple hard disk storage devices within a hard disk carrier housing and providing access to each of the multiple hard disk storage devices over one connection.

22. (Currently Amended) The access device of claim 21, wherein the processor virtualizes the logical addresses of the hard disk storage devices within the hard disk carrier housing as at least one aggregate volume to provide a layer of abstraction to the hard disk storage devices.

23. (Currently Amended) The access device of claim 21, wherein the processor aggregates the physical addresses of the hard disk storage devices within the hard disk carrier housing into logical addresses and makes the logical addresses available over one connection.

24. (Currently Amended) A storage system, comprising:

a plurality of hard disk carrier packages for providing high density storage, each hard disk carrier package comprising a hard disk carrier housing for holding multiple hard disk storage devices proximate to one another ~~and aligned in a row~~ and ~~an~~ a hard disk carrier housing access device, coupled to the hard disk carrier housing, for structuring access to physical addresses of the multiple hard disk storage devices and providing access to each of the multiple hard disk storage devices over one connection;

~~an~~ a hard disk array enclosure for holding the plurality of the hard disk carrier packages for providing high-density storage;

a package aggregator, coupled to the plurality of packages for providing high density storage, the package aggregator providing connections to each of the plurality of hard disk carrier packages for power, control and signaling; and

a system level controller, coupled to the plurality of hard disk carrier packages, for implementing a desired storage system configuration.

25. (Currently Amended) The package of claim 24, wherein the hard disk carrier housing access device further comprises an address aggregator for aggregating the physical addresses of the hard disk storage devices within the hard disk carrier housing into logical addresses and making the logical addresses of the hard disk storage devices within the hard disk carrier housing available over one connection.

26. (Currently Amended) The storage system of claim 25, wherein the address aggregator is configured to present the hard disk storage devices within the hard disk carrier housing as a single storage device.

27. (Currently Amended) The storage system of claim 25, wherein the address aggregator is configured to allowing each of the hard disk storage devices to be addressed individually using logical addresses.

28. (Currently Amended) The storage system of claim 24, wherein the system level controller is configured to provide logical volume aggregation across the plurality of hard disk carrier housing packages.

29. (Original) The storage system of claim 28, wherein the system level controller presents a desired RAID configuration across the aggregated logical volumes.

30. (Currently Amended) The storage system of claim 24, wherein the system level controller presents a desired system level RAID configuration across the plurality of hard disk carrier housing packages.

31. (Currently Amended) The storage system of claim 24, wherein the hard disk carrier housing access device further comprises a hard disk carrier housing package controller for virtualizing the logical addresses of the hard disk storage devices within the hard disk carrier housing as at least one aggregate volume to provide a layer of abstraction to the hard disk storage devices within the hard disk carrier housing.

32. (Currently Amended) The storage system of claim 31, wherein the system level controller presents a system level RAID configuration across the plurality of hard disk carrier housing packages and each hard disk carrier housing package controller presents a hard disk carrier housing package level RAID configuration across the plurality of hard disk storage devices ~~therein~~ within the hard disk carrier housing.

33. (Currently Amended) A method for providing high density storage, comprising:

holding multiple storage devices proximate to one another in a hard disk carrier housing; and

providing structured access to physical addresses of the multiple hard disk storage devices within the hard disk carrier housing over one connection.

34. (Currently Amended) The method of claim 33, wherein the providing structured access to physical addresses of the multiple hard disk storage devices within the hard disk carrier housing over one connection further comprises aggregating the physical addresses of the hard disk storage devices within the hard disk carrier housing into logical addresses and making the logical addresses of the hard disk storage devices within the hard disk carrier housing available over one connection.

35. (Currently Amended) The method of claim 33, wherein the providing structured access to physical addresses of the multiple hard disk storage devices within the hard disk carrier housing over one connection further comprises virtualizing the logical addresses of the hard disk storage devices within the hard disk carrier housing as at least one aggregate volume to provide a layer of abstraction to the hard disk storage devices within the hard disk carrier housing.